

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

1-4. (Canceled)

5. (Currently amended) An isolated nucleic acid encoding a polypeptide having at least 95% amino acid sequence identity with a polypeptide selected from the group consisting of:

- (a) a CatSper3 protein having CatSper3 activity in a cell capable of expressing CatSper3 activity;
- (b) at least a transmembrane domain of a CatSper3 protein;
- (c) at least an extracellular loop of a CatSper3 protein; [[and]]
- (d) at least a pore region of a CatSper3 protein; and
- (e) at least 4 consecutive amino acids of a CatSper 3 protein;

wherein said CatSper3 protein is encoded by SEQ ID NO: 1 or SEQ ID NO: 3.

6-74. (Canceled)